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10/633,609	07/31/2003	Laurakay Bruhn	10021296-1	5153

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER
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LIN, JERRY

ART UNIT	PAPER NUMBER
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1631

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,609	BRUHN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jerry Lin	1631	

### Office Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **DETAILED ACTION**

1. Applicants' arguments, filed November 11, 2006, have been fully considered and they are deemed to be persuasive in-part. However, in light of the amendment, new grounds of rejection are deemed necessary. The following rejections are newly applied as necessitated by amendment. They constitute the complete set presently being applied to the instant application.

### ***Status of the Claims***

Claims 1-13, 17-19, 34, 49, 50, 56, 57, and 59-65 are under examination.

Claims 14-16, 20-33, 35-48, 51-53, and 58 are withdrawn as being drawn to an unelected invention.

### ***Information Disclosure Statement***

2. The reference listed on the Information Disclosure Statement received on 12/11/2006 as "British Search Report" has not been considered because it is not a publication.

### ***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 62 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 62 recites the limitation of a “remote location.” The instant specification teaches on page 7 that a “remote location” is a location that is at least in a different building. However, it is unclear in the instant claim if the process of claim 61 is performed in a different building than from origination of the identifier and test request, or that the process is merely downloaded to the remote location and the process takes place at the remote location. For purposes of this Office Action, the latter interpretation will be used.

#### Response to Arguments

4. The Applicants have argued that one of skill in the art would know what the term “remote locations” means. However, the Examiner is not disputing the meaning of “remote location”, but the Examiner is attempting to put the term into context. To phrase it differently, the Examiner is trying to determine what limitation is remote from what other limitation. The Applicants have cited a passage in their specification that discusses embodiments of this limitation. The Examiner has used these embodiments in this office action, however it is still unclear how the term “remote location” is used in the instant claim.

This rejection is maintained from the previous office action.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-13, 46, 50, 56, 57, 59-63, and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Stern (US 2002/0055102 A1).

The instant claims are drawn to a method using a chemical array wherein a test request is received, a sub-array appropriate for that test request is determined, exposing the array to a sample, and reading the sub-array.

Regarding claims 1 and 59, Stern teaches a method of using a chemical array (abstract) that includes receiving a test request that uses a sub-array with probes at multiple feature locations (the Examiner is interpreting the choosing which microarrays to use as a test request) (page 11, paragraphs 0098-0099); receiving a pattern based on the test requests which are locations of features that make up a sub-array (page 11, paragraphs 0098-0099); exposing the array to the sample (page 2, paragraph 0017); and reading the sub-array (page 11, paragraphs 0098-0099).

Regarding claims 2-13, 59, 60 and 61, Stern teaches wherein the memory carries different patterns based on the test request (page 11, paragraphs 0098-0099); reading an array with an identifier (page 11, paragraph 0099); wherein signals from feature locations outside the sub-array pattern are not acquired (page 11, paragraph 0098) (i.e., focused scanning); wherein the signal that represents binding is saved from

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the sub-arrays and the same signal processing method is used (pages 9-10, paragraph 0093); wherein the test request is associated with the array (page 11, paragraph 0098); wherein multiple test requests associated with an array are read (page 11, paragraph 0098) (the Examiner is interpreting the selection of each individual microarray as a separate test, thus multiple tests requests are read); wherein the locations outside the sub-array pattern are incapable of providing signal data (page 10, paragraph 0095) (i.e., portions of the array are incapable of providing a signal data because they lack a radiation source that is focused on them).

Regarding claims 49, 50, 56, 57, and 63, Stern teaches an apparatus with an interrogating source and a detector (page 1, paragraph 0010); and a computer program to execute the instant methods (page 2, paragraph 0012).

According the Applicant's Specification on page 14, lines 2-5, embodiments of a remote location are an array user station and reader station. Regarding claim 62, Stern teaches conducting his method at a array user station or reader station (page 11, paragraph 0098).

This rejection is necessitated by amendment.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 6, 12, 13, and 17 -19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stern (US 2002/0055102 A1) in view of Podyminogin et al. (Nucleic Acids Research (2001) Volume 29, Number 24, pages 5090-5098).

The instant claims are drawn to wherein the feature locations of sub-array patterns outside the retrieved sub-array pattern are incapable of providing a signal data due to cross-linking.

Stern is applied as above.

Although Stern shows wherein feature locations outside the retrieved sub-array pattern do not have signal data, Stern does not teach that this lack of signal data is due to damage from cross-linking or cleavage.

Podyminogin et al. teach that the lack of binding may be caused by cross-linking or cleavage (page 5090, left column)

It would have been obvious to one of ordinary skill in the art at the time of the invention to discern why a no signal data was being produced at a feature location.

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Although Stern does not speculate possible reasons why a signal data is not present, it is well known in the art that a cleaved probe may not be able to continue to bind to its target or that cross-linking can damage a probe as stated by Podymnugin et al. Given that these are well-known problems with probes, one of ordinary skill in the art could have arrived at the conclusion that the probes were damaged either by cross-linking or cleavage. Furthermore, one of ordinary skill in the art would be motivated to discern the problems with the probes in order to fix the problem and conduct an accurate experiment.

This rejection is necessitated by amendment.

9. Claims 1, 34 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stern (US 2002/0055102 A1) in view of Sandstrom (US 2005/0079603).

The instant claims are drawn to wherein the feature locations outside the sub-array pattern are masked and the sample is from an individual.

Stern is applied as above.

Although Stern teaches a generic method where portions of an array may be chosen for an experiment by a user, Stern does not teach the source of a sample or that the microarrays are masked.

Sandstrom teaches a method of masking a microarray and taking a sample from an individual to conduct experiments (page 3, paragraphs 0022; page 9, paragraph 099; page 10, paragraph 0104).



It would have been obvious to one of ordinary skill in the art at the time of the invention, to combine the methods of Stern and Sandstrom to gain the benefit of being able to excite target sites. Sandstrom teaches that using a mask allows the user to target specific sites on a microarray (page 10, paragraphs 0104, 0106). This is advantageous because it allows the user to customize a microarray for a particular experiment. Similarly, Stern also has a goal of customizing the use of an array based on the user's choice. Given, that Stern's goal is to customize the use of an array, and Sandstrom teaches a method that allows further customization, one of ordinary skill in the art would have been motivated to combine the methods of Stern and Sandstrom to customize an array for a particular experiment.

This rejection is necessitated by amendment.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Lin whose telephone number is (571) 272-2561. The examiner can normally be reached on 10:00-6:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Irem Yucel can be reached on (571) 272-0781. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MICHAEL BORIN, PH.D.  
PRIMARY EXAMINER



JL